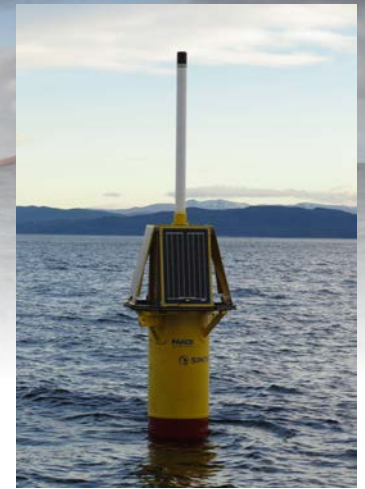


Oceanographic services and engineering

March 2015



SINTEF's oceanographic and ocean engineering activities includes field measurements analyses and modelling methodologies for the description of ocean (wind, wave and currents). Our customers range from the oil industry to coastal engineering disciplines and governmental departments. The projects range from tropical to arctic waters, both in offshore and coastal areas, covering the need for predictions, design values and impact assessment studies. Ocean data collection can be performed in real-time for monitoring purposes or through traditional internal storage of data.

Analyses

An array of tailor-made time series analysis, statistical analysis packages and related programs are available:

- Time series analysis
- Harmonic analysis
- Extreme value analysis
- Real-time current data for input to the MEMW model system
- Wave analysis
- Uni/multi-variate probability analysis
- Directional probability analysis
- Seasonal statistics
- Nonstationary extreme-value predictions
- Duration analysis

Modelling

The measured currents can be used in SINTEF's DREAM and OSCAR models for real-time monitoring of operations both in coastal areas and offshore.

We also cooperate closely with SINTEF Fisheries and Aquaculture which operates the SINMOD current model. This is a nested 3D model system that couples physical and biological processes in the ocean.

For wave modelling we offer the following services:

- Nonstationary time series modelling
- Fuzzy time series forecasting modelling
- Numerical modeling for ocean and coastal engineering, including spectral wave models for coastal regions (SWAN)

Instrumentation

- Current profilers (RDI Long Range ADCPs, AADI RDGP600 and Nortek Continental)
- Single point current meters (AADI Seaguard RCM)
- High precision CTD profilers
- Real-time system delivered by Develogic in cooperation with AADI

Contacts:

Grim Eidnes, Grim.Eidnes@sintef.no

Ragnhild L. Daae, Ragnhild.L.Daae@sintef.no

Christos Stefanakos, christos.stefanakos@sintef.no

www.sintef.no/Materials-and-chemistry-environment

www.sintef.no/EnvironmentalMonitoringModelling